	PHASE CHART													
	- (R) (F) (F) (F)	2 (R) (Y) (G)	3 (R) (Y) (G)	4 R Y G	5 (R) (Y) (G)	6 R Y	7 R Y G	8 R Y G	9 R Y G G	R Y G		R Y G		
PHASE I + 5	≪ -G	- G	R	R	≪ -G	-G	R	R	R	R	R	R		
I + 5 CHANGE	TO I	TO I+6, 2+5 OR 2+6								*	A superior de la constitución de			
PHASE I + 6	≪-R	#-R	R	R	≪ -G	∜ -G	G	G	R	R	R	R	4	
I + 6 CHANGE	≪-R	₹R	R	R	*Y	<y< td=""><td>Υ</td><td>Y</td><td>R</td><td>R</td><td>R</td><td>R</td><td>*</td><td></td></y<>	Υ	Y	R	R	R	R	*	
PHASE 2 + 5	G	€-G	G	G	-R-	≪-R	R	R	R	R	R	R		
2 + 5 CHANGE	<y< td=""><td>—Y——</td><td>Υ</td><td>Υ</td><td></td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>*</td><td></td></y<>	—Y——	Υ	Υ		R	R	R	R	R	R	R	*	
PHASE 2 + 6	≈—R——	#-R	G	G		*-R	G	G	R	R	R	R		
2 + 6 CHANGE		R	Y	Y	4-R	≪− R	Υ	Υ	R	R	R	R	1	
PHASE 3	* 	≪-R	R	R	4-R	≪-R	R	R	R	R	G/+G-	G		
3 CHANGE	₩-R	«-R	R	R		«R	R	R	R	R	Y	Y		
PHASE 4		₩-R	R	R	≉-R	≪-R	R	R	G /∗-G-	G	R	R	4.1	
4 CHANGE	←R	≪R	R	R	≪-R	«-R	R	R	Υ	Y	Y	R	Approximation and the state of	di shikkunga marakan da sa
FLASHING OPERATION	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	+ 4	
PRE-EMPTION PHASES														
PE #I	«-R	# <u>R</u>	R	R	-≪G	≪ -G	G	G	R	R	R	R	-	
PE #I CHANGE		«-R	R	R	«-Y	4 <u>4</u> Y	Υ	Υ	R	R	R	R	•	
PE #2	G	-≪G	G	G	«-R	≪-R	R	R	R	R	R	R	Ep.	
PE #2 CHANGE	«Y	4-Y	Υ	Υ	-R		R	R	R	R	R	R	*	

NOTE:

THE PEDESTRIAN SIGNAL HEADS ARE TO BE COVERED DURING CONSTRUCTION.

PROJECT DESCRIPTION

GENERAL:

THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING INTERSECTION TRAFFIC SIGNAL AND STREET LIGHTING AT MD 235 AND MACARTHUR BLVD. IN ST. MARY'S COUNTY. MD 235 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION:

I. NORMAL OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA SIX-PHASE, FULL-TRAFFIC ACTUATED MODE, WITH THE MD 235 APPROACHES RUNNING CONCURRENTLY AND MACARTHUR BLVD. APPROACHES OPERATING AS SPLIT PHASES. EXCLUSIVE LEFT TURN PHASING WILL BE PROVIDED FOR THE MD 235 APPROACHES.

2. SPECIAL OPERATION

THE INTERSECTION WILL OPERATE AS INDICATED ABOVE UNLESS THE OPTICOM DEVICE IS ACTIVATED WHICH WILL PRE-EMPT THE TRAFFIC SIGNAL AND STOP THE EB AND WB APPROACHES OF MACARTHUR BLVD, AND MILLSTONE ROAD AND EITHER THE NB OR SB APPROACH ON MD 235.

CONTROLLER REQUIREMENTS:

A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH SEVEN (7) FOUR-CHANNEL, TIME DELAY OUTPUT LOOP DETECTOR AMPLIFIERS. INTERSECTION MONITOR WITH BATTERY BACK-UP FOR PHONE DROP. TELEMETRY MODULE, ISOLATION BOARD AND SPECIAL RELAY HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET.

SPECIAL NOTE:

UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF SHA AT (410) 787-7631 TO ARRANGE FOR THE PHONE LINE INSTALLATION. THE CONTRACTOR IS TO PROVIDE MR. SNYDER WITH THE NEAREST STREET ADDRESS, ZIP CODE AND PHONE NUMBER.

-A,B,C,D,EEX. I/C _ EX I/C-A,B,C,D,E,I/C-A,B,I/C EX. 1/0 EX. 1/(EX. 1/0 EX.I/C EX.I/C NEW LOOPS ARE TO BE CONNECTED TO EXISTING EX. I.

WIRING DIAGRAM

PROJECT CONTACTS

THE CONTACT PERSONS FOR DISTRICT #5 ARE AS FOLLOWS:

MR. PAUL ARMSTRONG PHONE: 410-841-5450

MR. LAWRENCE E. ELLIOTT ASSISTANT DISTRICT ENGINEER - TRAFFIC PHONE: 410-841-5450

MR. JOHN MAYS UTILITY ENGINEER PHONE: 410-841-5450

MR. RICHARD L. DAFF. SR. CHIEF, TRAFFIC OPERATIONS DIVISION PHONE: 410-787-7630

THE POWER COMPANY REPRESENTATIVE IS: SOUTHERN MARYLAND ELECTRIC COOPERATIVE (SMECO) PO BOX 1937 HUGHESVILLE, MD 20637-1937 301-274-3111

DISTRICT ENGINEER

ES - EXISTING SERVICE

WIRING FOR PHASE I LOOPS AT THE EXISTING HAND BOX.

REWIRE CONTROLER FOR

PROPER PHASING.

EX. I/C - EXISTING INTERCONNECT (12 PAIR COMMUNICATION CABLE. SELF SUPPORTING)

LW - LOOP WIRE (NO. 14 A.W.G.)

2-CONDUCTOR ELECTRICAL CABLE

WIRING KEY

A,B,C,D,E (ALUMINUM SHIELDED)

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

CATEGORY CODE NO. SPEC. SECTION DESCRIPTION QUANTITY 973023 7.5 SF SHEET ALUMINUM SIGNS

> - 2 EACH R3-5 SIGN (30"×36") "LANE USE CONTROL - LEFT ONLY" SPAN WIRE MOUNT

SEE TITLE SHEET

REGION NO.

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

SPEC. SECTION	ITEM No.	QUANTITY	DESCRIPTION
104	120500	L.S.	MAINTENANCE OF TRAFFIC
***************************************	114245	35 L.F.	24 IN. WHITE REMOVABLE PREFORMED PAVEMENT MARKING TAPE (STOP LINE)
205	203030	I C.Y.	TEST PIT EXCAVATION
805	800000	390 L.F.	FURNISH AND INSTALL 2 IN. SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805	805160	60 L.F.	FURNISH AND INSTALL I IN. LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
805	805150	203 L.F.	FURNISH AND INSTALL 3 IN. SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
810	861104	630 L.F.	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR ALUMINUM SHIELDED
810	862101	3720 L.F.	FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO.14 AWG)
813	813015	7.5 S.F.	INSTALL OVERHEAD SIGN
815	862102	1140 L.F.	FURNISH AND INSTALL SAW CUT FOR SIGNAL (LOOP DETECTOR)
<u> </u>	860265	12 EACH	RELOCATE EXISTING SIGNAL HEAD
,	800000	4 EACH	RELOCATE EXISTING SIGN ON SPAN WIRE OR MAST ARM
810	810011	3 EACH	FURNISH AND INSTALL LOOP DETECTOR SPLICE TO EXISTING 2-CONDUCTOR (ALUMINUM SHIELDED) CABLE

CONSTRUCTION DETAILS

- A. USE EXISTING WOOD POLE
- B. USE EXISTING CONDUIT
- C. USE EXISTING HANDBOX
- D. INSTALL NEW SIGNS AND ADJUST SIGNS AND SIGNAL HEADS, USE EXISTING SPAN AND REMOVE UNUSED WIRE AS DIRECTED BY THE ENGINEER.
- E. INSTALL 6' × 30'LOOP DETECTOR, ENCASED IN 1/4" FLEXIBLE TUBING (3,6,3 TURNS)
 OUADRUPLE TYPE. (LOOP DETECTORS WILL BE LOCATED AS DIRECTED BY THE ENGINEER.)
- F. INSTALL HANDHOLE.
- G. INSTALL I'LIQUID TIGHT FLEXIBLE NON-METALLIC ELECTRICAL CONDUIT (DETECTOR WIRE SLEEVE).
- H. INSTALL 2" SCHEDULE 80 ELECTRICAL CONDUIT TRENCHED.
- I. INSTALL 3" SCHEDULE 80 ELECTRICAL CONDUIT SLOTTED.
- J. USE EXISTING SPAN.
- K. INSTALL 24 IN. WHITE REMOVABLE PREFORMED PAVEMENT MARKING TAPE (STOP LINE).
- L. DISCONNECT EXISTING LOOP DETECTORS AND INSTALL NEW LOOP DETECTORS TO EXISTING ALUMINUM SHIELDED CABLE. PLEASE TAKE CARE IN INSTALLING THE LOOP DETECTORS INTO THE PROPER PHASING WHEN REWIRING THE CONTROLLER.
- M. ABANDON EXISTING LOOP DETECTOR.
- N. REWIRE THE CONTROLLER AS DIRECTED BY THE ENGINEER.
- O. REMOVE EXISTING PAVEMENT MARKINGS.

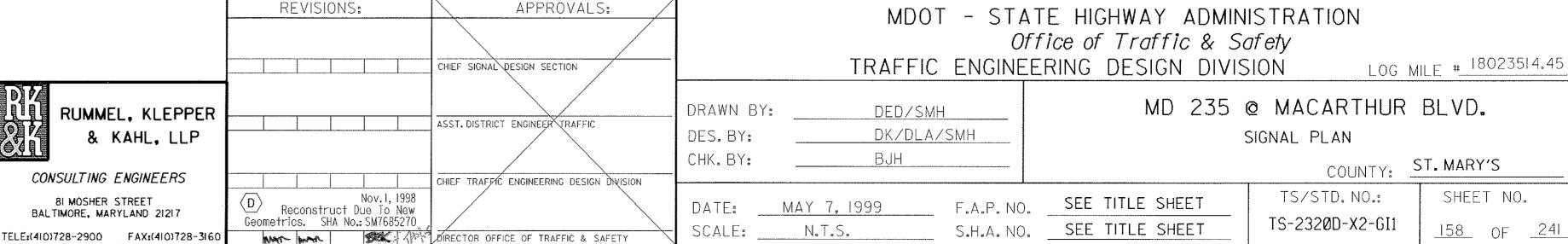
PHASE 2

TEMPORARY TRAFFIC SIGNAL

SHEET NO.

<u>158</u> OF <u>241</u>

SS-14



---EX. I/C